



Estate of Jordan Baker
v
Juventino Castro
Biomechanical Analysis

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Project Number: *34-5239*

Date: *October 16, 2017*



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Information Reviewed

You retained Explico Engineering to conduct a biomechanical analysis pertaining to the above captioned matter that involved an incident on January 16, 2014. This report serves as a summary of the technical consulting services provided to date.

The following items have been received, considered, and reviewed:

- Deposition Transcripts
 - Lieutenant Zachery Becker, with exhibits, taken April 12, 2017
 - Officer Svetlana Menefee, with exhibits, taken March 10, 2017
 - Officer Juventino Castro, with exhibits, taken on October 14, 2016
- Witness Statements (Affidavits) of Juventino Castro, dated January 17, 2014 and March 7, 2014
- Harris County Grand Jury Testimony of Juventino Castro, with exhibits, taken on December 16, 2014
- Drawing by Officer S. Menefee, CSU-13, Houston Police Department
- Harris County Institute of Forensic Sciences Autopsy Report, dated January 17, 2014
- Houston Police Department Personnel Records of Juventino Castro
- Houston Police Department Current Information Report
- Second Amended Complaint
- Six (6) X-Rays of Jordan Baker
- Photographs
 - Eighty-Eight (88) Color Photographs taken during the Autopsy of Jordan Baker
 - Three-Hundred-One (301) Color Photographs taken at the Incident Scene
 - Nine (9) Color Photographs taken at the Incident Location
 - Twenty-Nine (29) Color Photographs taken at the Incident Location by Civil Rights Division
 - Twenty-Nine (29) Black and White Photographs taken at the Incident Location by Civil Rights Division
- Surveillance Log, dated July 7, 2017
- Videos
 - Two (2) Videos taken at the Incident Scene
 - Two (2) Surveillance Videos from Sun Shot Beauty Supply taken during the Subject Incident

In addition to the above, I traveled to Houston, Texas on October 10, 2017 and inspected the incident location. During this inspection, I performed a Three-Dimensional (3D) laser scan of the location. The results of the inspection are discussed in detail in the body of the text below.



Conclusions and Opinions

I hold the following opinions to a reasonable degree of engineering and biomechanical certainty.

1. The bullet's trajectory through Mr. Baker's torso can be described as: from his left to right, superior to inferior, and anterior to posterior.
2. The trajectory of the bullet within Mr. Baker's torso indicates that Officer Castro's discharged his weapon while aiming with a downward angle.
3. Mr. Baker's injuries indicate that his torso was rotated clockwise in the axial plane with respect to Officer Castro's weapon.
4. Mr. Baker's posture and the trajectory of the bullet are consistent with a scenario in which Mr. Baker was rotating his body clockwise and away from Officer Castro while attempting to accelerate in the opposite direction at the time Officer Castro discharged his weapon.
5. The physical evidence is inconsistent with Officer Castro's statement, affidavits, deposition testimony and grand jury testimony regarding the location and the posture of Mr. Baker when he discharged his weapon.

This report summarizes work performed to date and presents the findings resulting from that work. The findings presented herein are made to a reasonable degree of engineering and biomechanical certainty, and are based on my experience, education, and training. I reserve the right to supplement this report and to expand or modify opinions based on review of additional material as they become available through ongoing discovery and/or through any work or review of additional work performed by others.

Brian T. Weaver, P.E.
Principal Engineer



Background

Houston Police Department Current Information Report (Dated January 17, 2014)

Details of Offense

"An off duty officer working an extra job attempted to stop a suspicious male. A struggle and foot chase ensued. The suspect eventually stopped fleeing and charged at the officer while reaching in his waistband. The officer was in fear for his life and discharged his duty weapon one time at the suspect. The suspect was pronounced deceased at the scene. ML # 14-0202"

Custodial Death Report (Dated January 29, 2014)

Summary of How the Death Occurred

The manner in which the shooting took place is described from the version of events provided by Officer Castro, the only known surviving eyewitness to the shooting. Officer Castro chased after the male who ran behind the building and began running off the paved lot and into the grassy easement along the bayou (par. 13). According to officer Castro, the male suddenly stopped and turned to face Officer Castro (par. 13). Officer Castro stopped 15-25 feet from the male, pointed his gun, and yelled at the male to stop and get on the ground (par. 13). According to Officer Castro, the male was looking directly at him and said, "I'm not going to jail" (par. 13). The report stated,

"the male then charged towards Officer Castro, pulling his hands close to his waist area, making Officer Castro believe that the male was reaching for a weapon. Officer Castro thought the male was reaching for a weapon and was in the process of attacking him. Officer Castro, fearing for his life, fired one shot at the male, striking him in the chest" (par. 14).

Affidavit (dated January 17, 2014)

According to the first affidavit of Officer Castro:

"The suspect was facing me directly, and obviously know that I had him at gun point and was ordering him to get down. The area was dark where we were, but I could still see the suspect enough to make out his actions ... The suspect stood there facing me for a few seconds, as if sizing up what to do. He said one last time very angrily, I'm not going to jail! He then began charging towards me. At that time, the suspect pulled his hands in close towards his front waist area, and it looked to me like he was trying to grab something. I felt that the suspect was likely trying to gain access to a weapon and was definitely in the process of attacking me. Fearing for my life, I fired one shot at the suspect and appeared to



hit him center mass. The suspect winced and leaned forward, and started breathing really heavily. Instead of giving up, however, he tried to start running again down the alley to the west. He made it another 20 or 30 feet or so, but finally collapsed and landed face-first on the ground."

Affidavit (dated March 7, 2014)

According to the second affidavit of Officer Castro:

"The suspect stood there facing me for a few seconds, as if sizing up what to do. He said one last time very angrily, "I'm not going to jail!" He then began charging towards me. At that time, the suspect pulled his hands in close towards his front waist area, and it looked to me like he was trying to grab something. I felt that the suspect was likely trying to gain access to a weapon and was definitely in the process of attacking me. Fearing for my life, I fired one shot at the suspect and appeared to hit him center mass.

The suspect winced and leaned forward, and started breathing really heavily. Instead of giving up, however, he tried to start running again down the alley to the west. He made it another 20 or 30 feet or 30, but finally collapsed and landed face-first on the ground. When he fell, his left hand was still in front of him and underneath him."

Grand Jury Testimony of Juventino Castro (December 16, 2014)

According to Officer Castro's testimony before the Grand Jury: Mr. Baker ran through the parking lot alongside the building near Little Caesar's and then ran north toward the bayou (80). Mr. Baker ran approximately 7 feet past the grass and concrete and then came to a stop (84-85). When Mr. Baker stopped, he turned around, facing him (86, 88). Mr. Castro took his gun out of the holster again (88). He stated,

"Uh, he starts to tell me that he's not going to go to jail a few more times. And then that's when he takes off running towards me again" and "at that point, uh, as he's running towards me he goes to reach for his waistband like this. And I kept on telling him, "show me your hands. Show me your hands." And he wouldn't do it. So at that point I -- I used deadly force and I discharged my firearm" (88). He also stated, "But definitely when he turned around to face me, you know, he -- he was reaching for his waistband" (111).

Mr. Castro described how Mr. Baker ran toward him during his testimony as:

"Uh, I would say like a dead sprint. Like he sprinted. Like he just picked up speed like -- he was coming at me like in a pretty fast rate of speed" (89).

"He was making the usual movements. Uh -- uh, he had his hands bald. Uh, and he was just -- -- he was not -- he wasn't jogging or" (92).



"Uh, he started off I guess to get speed with his hands like this. And then as he ran he went like this. He started running towards me. Like with his hands kind of crouched down a little bit" (133).

Mr. Castro described how far away Mr. Baker was from him when he fired his gun as,

"Uh, probably from where I'm standing to like right here. Uh, seven -- seven or eight feet" (89). Mr. Baker was sort of leaning forward with his hands at his waistband (92-93, 135-136).

He could see that he shot Mr. Baker because he moved forward (90). Mr. Baker pivoted to his right and then ran 15-20 feet (90-91, 94). Mr. Baker fell face down with his hands positioned like he was holding on to his waistband (91, 94). He pulled Mr. Castro's hands out from underneath him and handcuffed each hand to the back of his belt using two sets of handcuffs (95). When Mr. Castro pulled Mr. Baker's hands out from underneath him, he heard Mr. Baker breathing hard (94).

Mr. Castro was five foot eleven inches tall and weighed 191 pounds (122-123).

Deposition Testimony of Juventino Castro (October 14, 2016)

At his deposition in this matter, Officer Castro testified: Mr. Baker ran toward Little Caesars (210). He was in a "full speed" chase as he ran after Mr. Baker (290). Mr. Baker touched the side of the Little Caesar's "closer" and then started running back toward the bayou (216-217). Mr. Baker stopped running near a storage facility (218-219). There was light near the storage facility and he could see that Mr. Baker turned toward him (223). He took out his gun (224). Mr. Baker told him that he was not going back to jail and began to ran toward him (224).

For the first time, Officer Castro also testified that Mr. Baker ran toward him in a "crouch"; "that's when he started digging towards his front waistband" with his hands (226, 228-229). Mr. Baker ran "five to seven feet" before he shot him once in his center mass (229-230). Officer Castro shot Mr. Baker because he thought that Mr. Baker had a gun (136).

Mr. Baker immediately winced, like he was gasping for air (230). Mr. Baker turned direction and started to run westbound (230). Officer Castro chased Mr. Baker until Mr. Baker fell face down (56, 230). He then handcuffed Mr. Baker using two sets of handcuffs (56, 230). He handcuffed both of Mr. Baker's hands to his belt (56). After handcuffing Mr. Baker, Officer Castro stood in front of him and called the dispatcher (57-58). He did not attempt to determine if Mr. Baker was still alive (58). Within 20-30 seconds, 15 patrol cars arrived (82). Within 3-5 minutes, the fire department arrived (84).

Mr. Castro was right handed (123). Mr. Castro was five foot eleven inches tall and weighed 195 pounds (273-274).



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Deposition Testimony of Officer Menefee

Officer Menefee was a crime scene unit officer at the time of the subject incident (5). She recorded video at the scene and noticed that there was blood in the back alley, but did not mark it with any evidence marker (19). Additionally, she did not take any steps to measure the exact location of any of the blood that was on the ground (20).

Deposition Testimony of Lieutenant Becker

Lieutenant Becker is a lieutenant with the Houston Police Department, assigned to the Homicide Division (4, 10). Officer Castro described the events of the night to him (46). Lieutenant Becker reviewed the positioning of Officer Castro and Mr. Baker when Officer Castro fired his gun (52). While reviewing the position at the time of the shooting, Lieutenant Becker was north of Officer Castro by approximately 8 to 10 feet (57) (Figure 1).

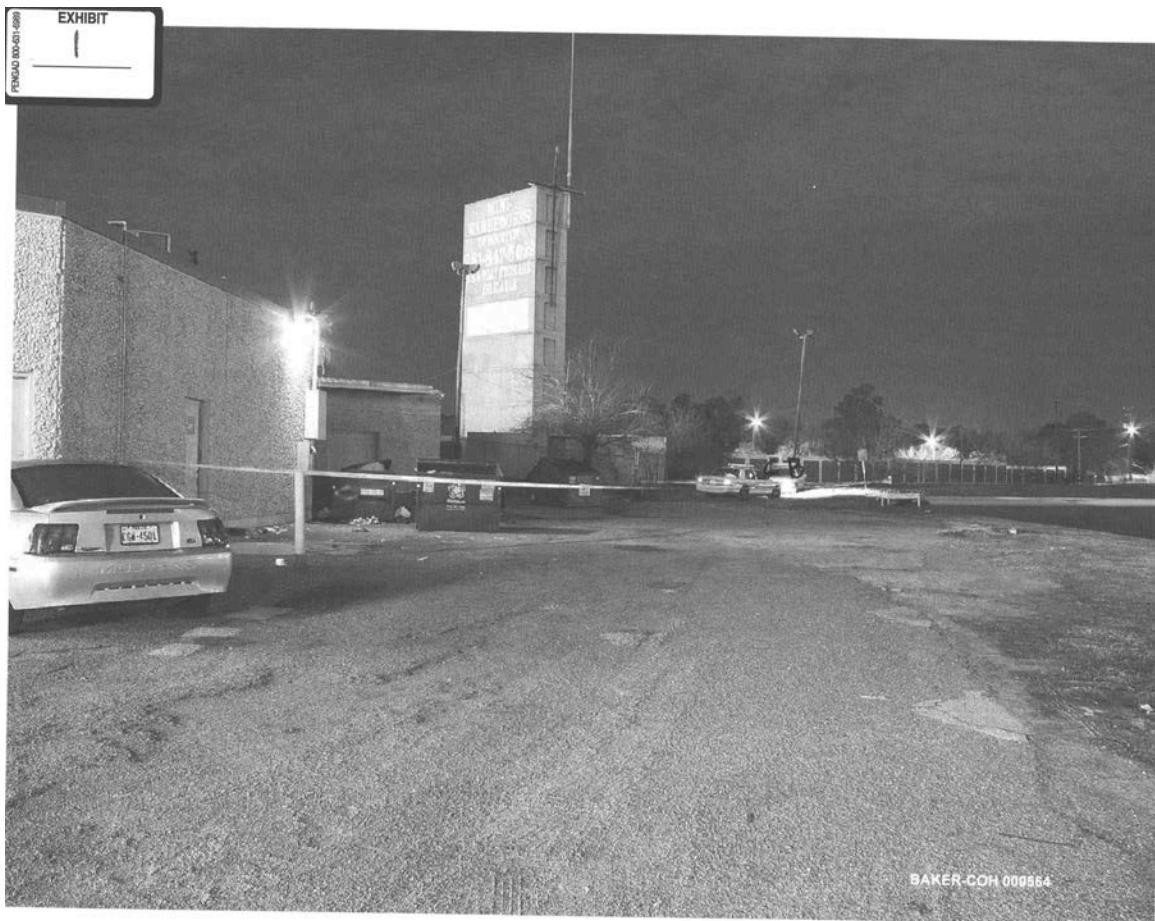


Figure 1: Exhibit 1 from Lieutenant Becker's deposition where he marked the location where Officer Castro ("C") and he ("B") were standing to indicate the location where Officer Castro fired his weapon at Mr. Baker.



Scene

According to the Houston Police Department Current Investigation Report, the subject incident occurred at the strip center located in the 5700 block of West Little York in Houston, Texas. A Google Earth aerial image of the approximate location of the subject incident is depicted in Figure 2.



Figure 2: Google Earth aerial image of the approximate location of the subject incident.

Autopsy Report

The postmortem exam on the body of Jordan Baker was performed beginning at 11:30 a.m. on January 17, 2014. The decedent measured 70 inches in length (five foot eight inches) and weighed 198 pounds. According to the report,

"Gunshot wound of the chest: A penetrating gunshot entrance wound of the anterior lateral left side of the chest is located 18-1/2 inches below the top of the head and 5 inches left of the anterior midline. The circular entrance wound measures 3/8 inch in diameter. There is no evidence of soot deposition or gunpowder stippling on the skin surrounding the entrance wound. A concentric 1/32 inch wide marginal abrasion is noted. The wound path is through the skin, subcutaneous tissue and musculature of the anterior left side of the chest, the anterior left fifth rib, the upper lobe of the left lung, the heart (left ventricle perforation), the esophagus, the lower lobe of the right lung, and the posterior aspect of the right ninth rib. The direction of the wound path is front to back, left to right and slightly downward. A deformed, large-caliber, copper-



jacketed, hollow-point bullet is recovered from the musculature of the lateral right side of the back. The recovered projectile is photographed, placed in a labeled envelope and submitted as evidence."

Biomechanical Analysis

Injury pattern

The approximate locations of the entrance point and final position of the bullet are depicted in Figure 3. These two positions clearly indicate that the bullet travelled through Mr. Baker's torso from his left to his right, superior to inferior (up to down), and anterior to posterior (front to back). It has been shown that the trajectory of projectiles prior to body penetration can be reasonably determined by extrapolating the vector of the wound path (Folio et al., 2011). Doing this, it is evident that the bullet was travelling left to right and up to down with respect to Mr. Baker's body prior to penetration. This indicates that Mr. Baker was rotated clockwise in the axial plane with respect to Officer Castro's gun and that the barrel of Officer Castro's gun was at a higher elevation than the entrance point of the bullet and angled downward.

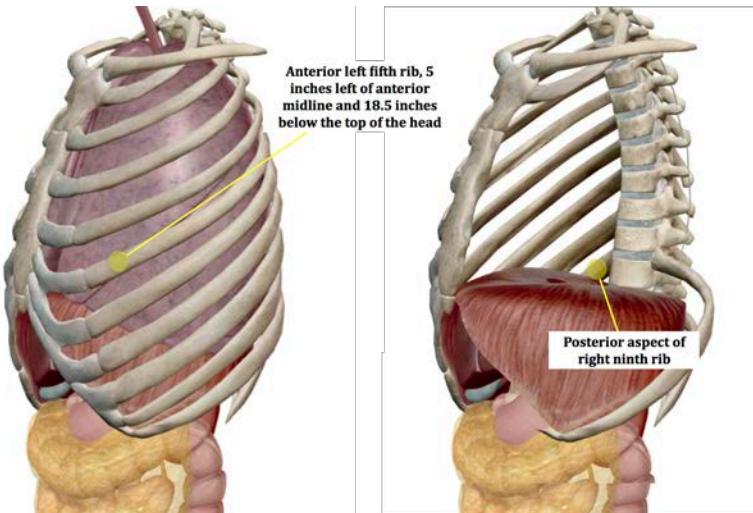


Figure 3: Approximate locations of the bullet entrance (left) and final position (right).

Analysis

In order to determine the approximate positions of Mr. Baker and Officer Castro at the time of gunshot, a scaled model of the scene was developed using a to-scale three-dimensional model. This was created in the commercially available 3D StudioMax computer program. The dimensions of the scene were captured with a FARO X330 scanner during my inspection. Models of Mr. Baker and Officer Castro were scaled to match the anthropometrics of Mr. Baker and Officer Castro as denoted by the autopsy



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report and Houston Police Department Personal Records of Juventino Castro, respectively.



Figure 4: Location of the casing at the scene denoted by the "1" marker.

The location of the bullet casing, blood, Mr. Baker's flip-flop / shoe, and Mr. Baker's rest position were determined by measurements taken at the scene, post incident photographs, and post incident video. Officer Menefee stated that she noticed blood on the ground in the alley, but did not take any steps to measure the exact location (20). However, the video she took at the scene (HARRIS DAO-000599 - Crime Scene Video MVI_0275) depicts drops of blood at timestamp 9:02 and again at timestamp 9:22 (Figure 5 and Figure 6).



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Figure 5: Timestamp 9:02 into scene video depicting drops of blood (circled).



Figure 6: Timestamp 9:22 into scene video depicting drops of blood (circled).



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Figure 7: Scene photograph depicting the approximate location of the first visible blood drops.

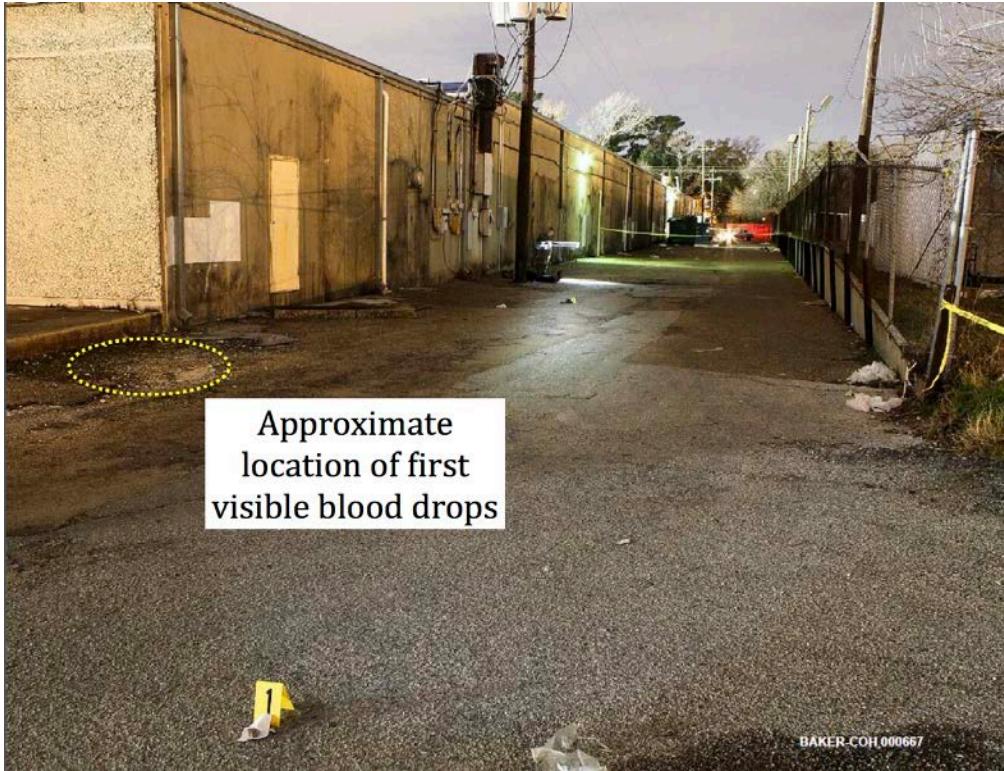


Figure 8: Scene photograph depicting the approximate location of the first visible blood drops.



The scenario provided by Officer Castro was investigated by placing the models in the scene consistent with his statement, grand jury testimony, and deposition testimony. Specifically, Officer Castro testified to the grand jury that Mr. Baker ran approximately 7 feet past the grass and concrete and then came to a stop (84-85). When Mr. Baker stopped, he turned around, and was directly facing him (86, 88). At this point Officer Castro was between 15 and 20 feet from Mr. Baker (88). This scenario is modeled in Figure 9 through Figure 12.

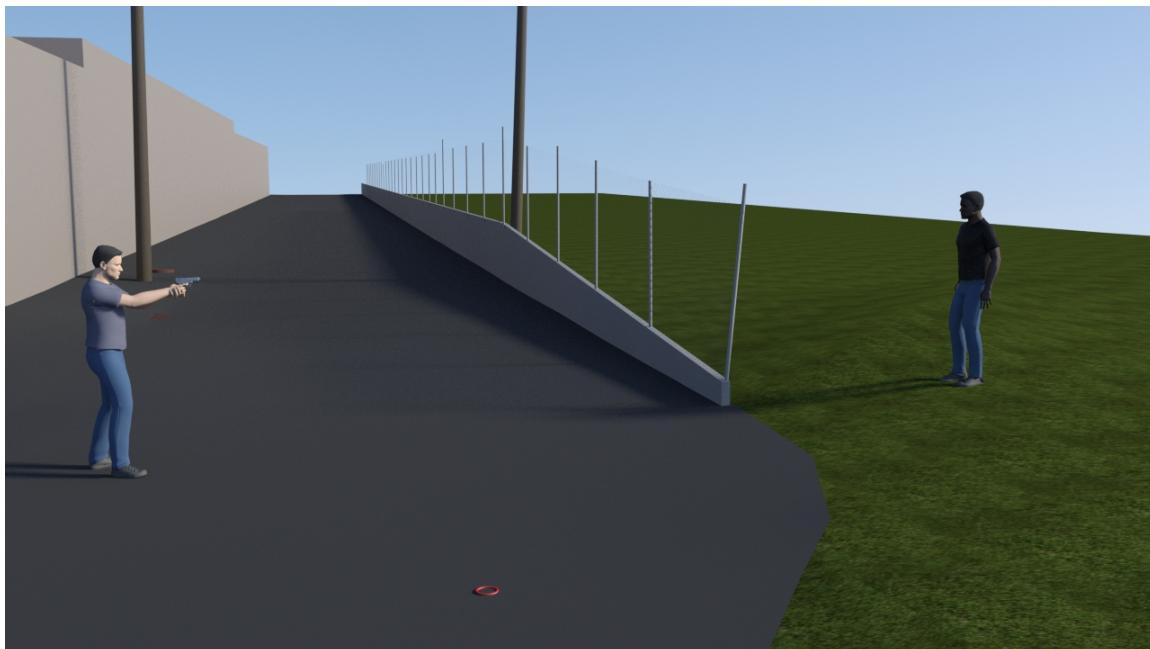


Figure 9: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario described by Officer Castro.

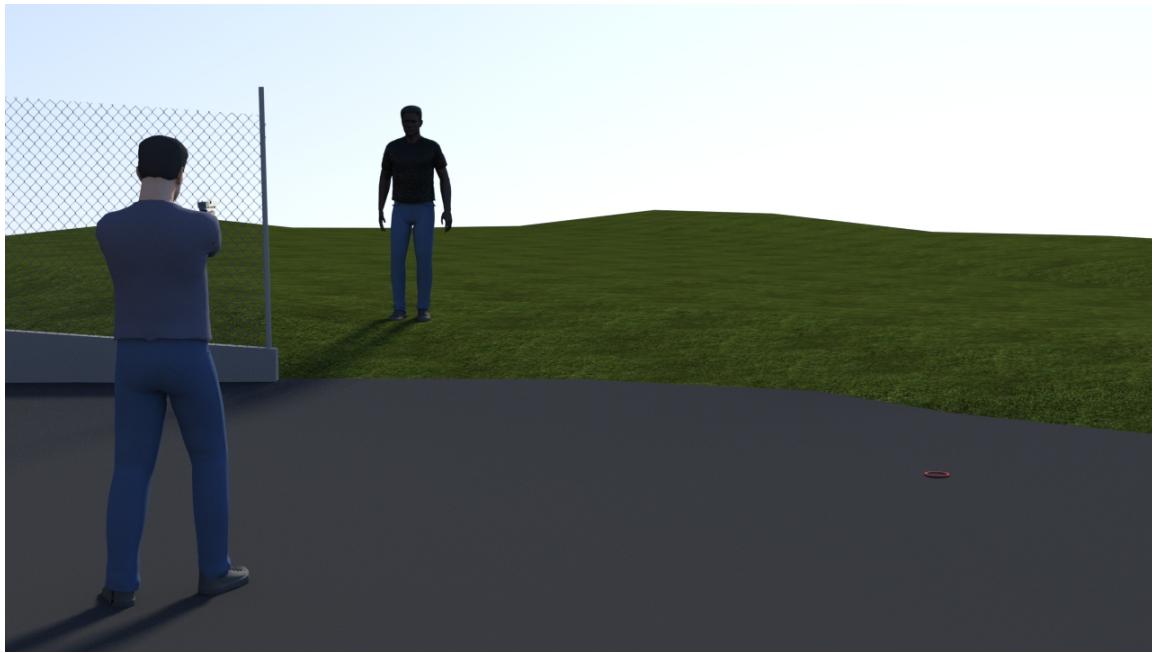


Figure 10: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario described by Officer Castro.

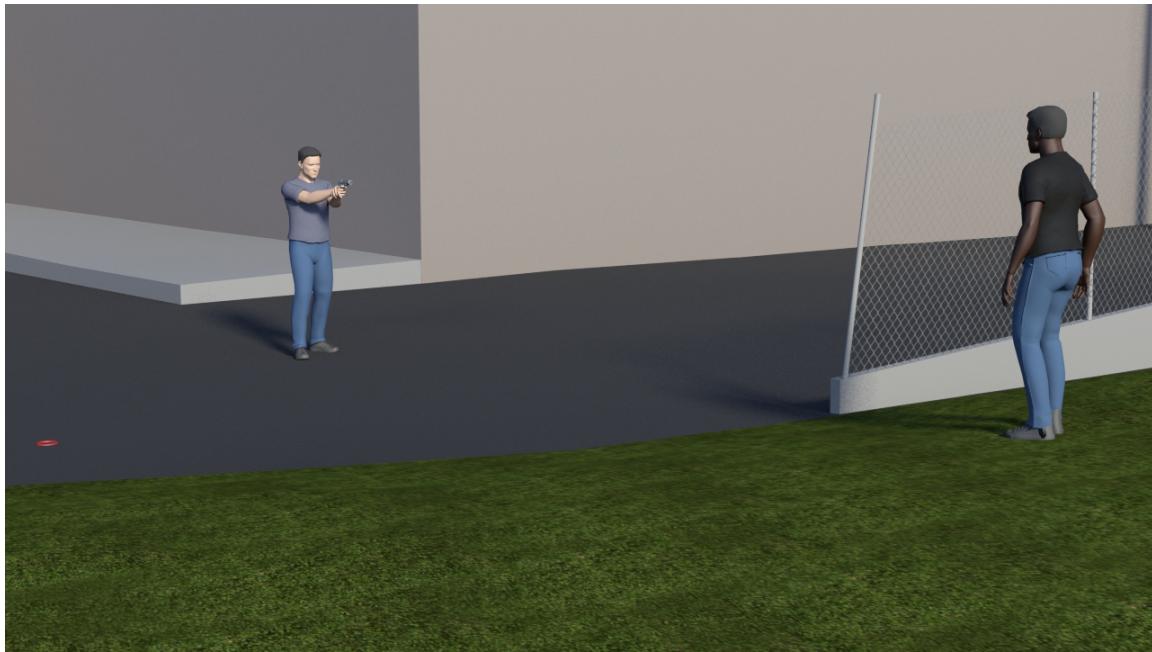


Figure 11: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario described by Officer Castro.



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Figure 12: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario described by Officer Castro.

Officer Castro has provided two variants of what happened next. First, in his affidavits and before the grand jury, Officer Castro stated that Mr. Baker charged directly at him and reached for his waistband. In his testimony to the grand jury, Officer Castro described the motions of Mr. Baker as a “dead sprint” (89). This is modeled in Figure 13 through Figure 16.



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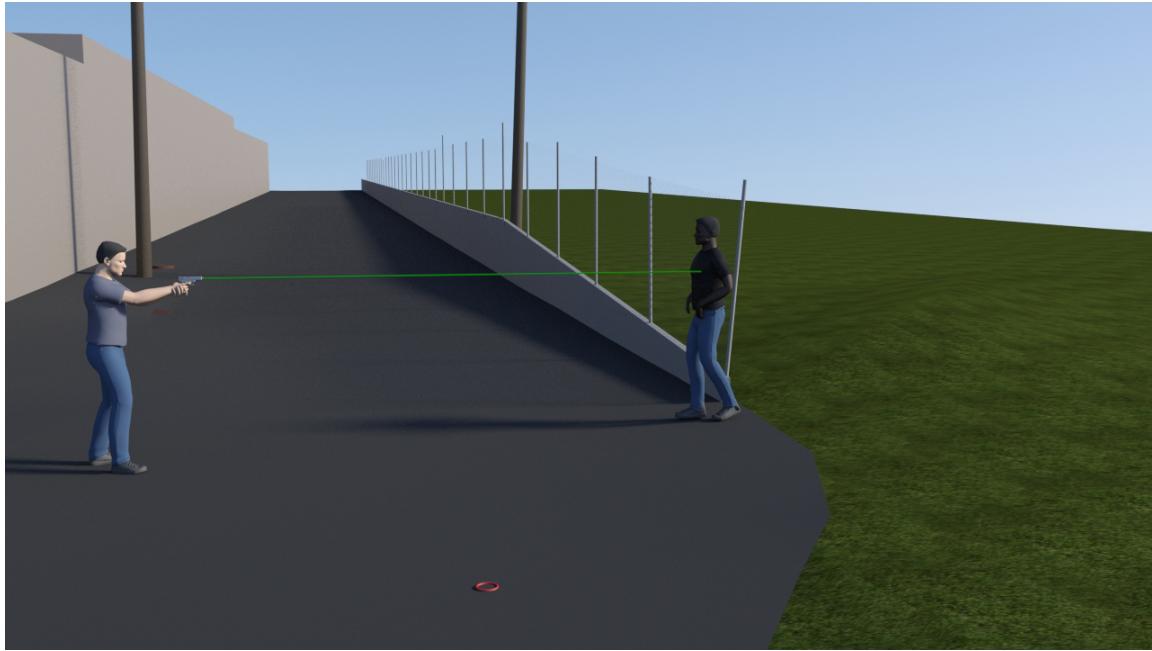


Figure 13: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario described by Officer Castro in his affidavits and before the grand jury. The location of the bullet casing is marked with a red circle.

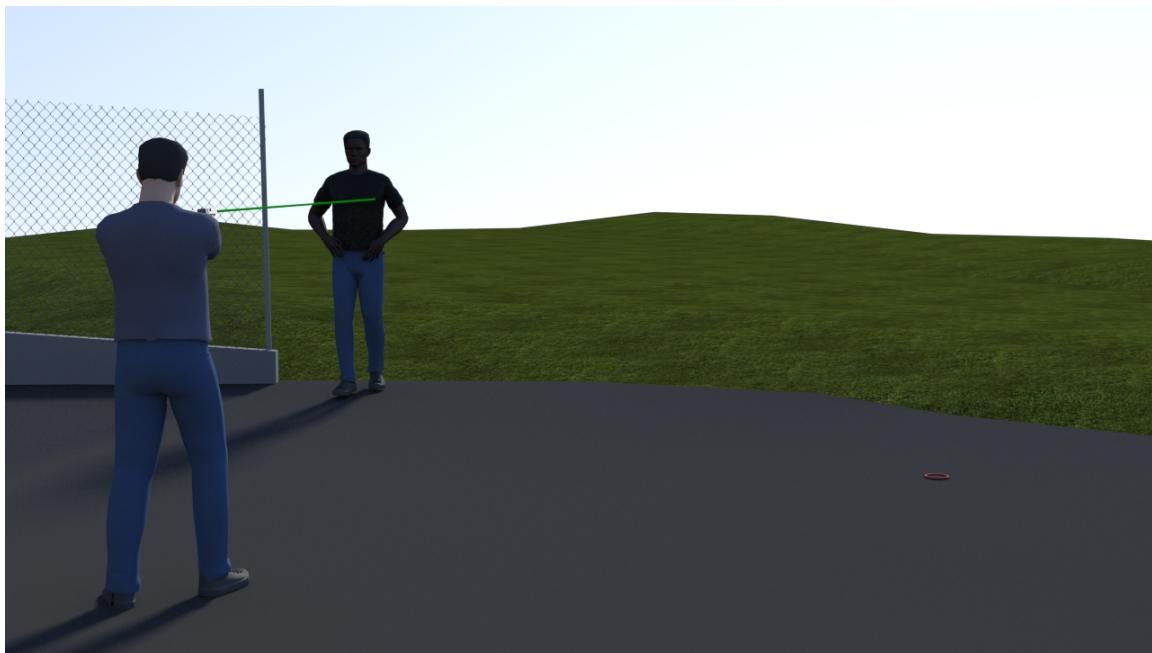


Figure 14: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario described by Officer Castro in his affidavits and before the grand jury. The location of the bullet casing is marked with a red circle.



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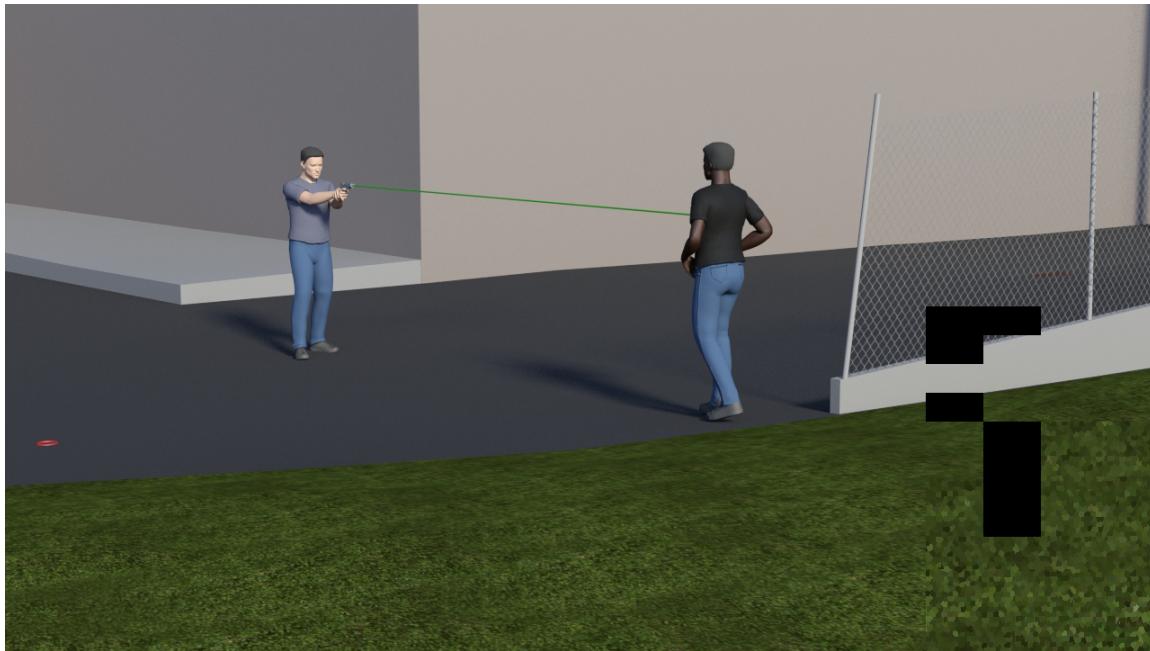


Figure 15: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario described by Officer Castro in his affidavits and before the grand jury. The location of the bullet casing is marked with a red circle.



Figure 16: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario described by Officer Castro in his affidavits and before the grand jury. The location of the bullet casing is marked with a red circle.

Second, according to Officer Castro's deposition, but not his grand jury testimony or affidavits, in addition to charging directly at him, Officer Castro claimed that Mr. Baker was in some sort of "crouch" as he ran toward him, and "that's when he started digging



towards his front waistband" (226, 228-229). Mr. Baker ran "five to seven feet" before he shot him once in his center mass (229-230). This is modeled in Figure 17 through Figure 20.

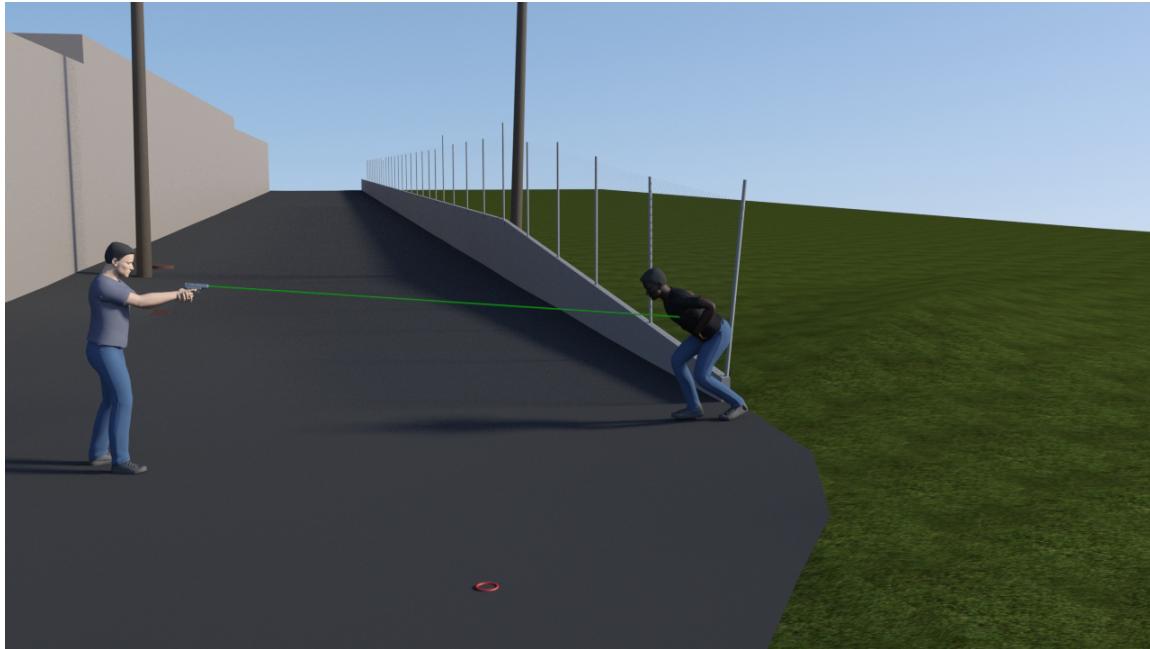


Figure 17: Graphic depicting Officer Castro's testimony regarding the location and posture of Mr. Baker when he discharged his firearm. The location of the bullet casing is marked with a red circle.

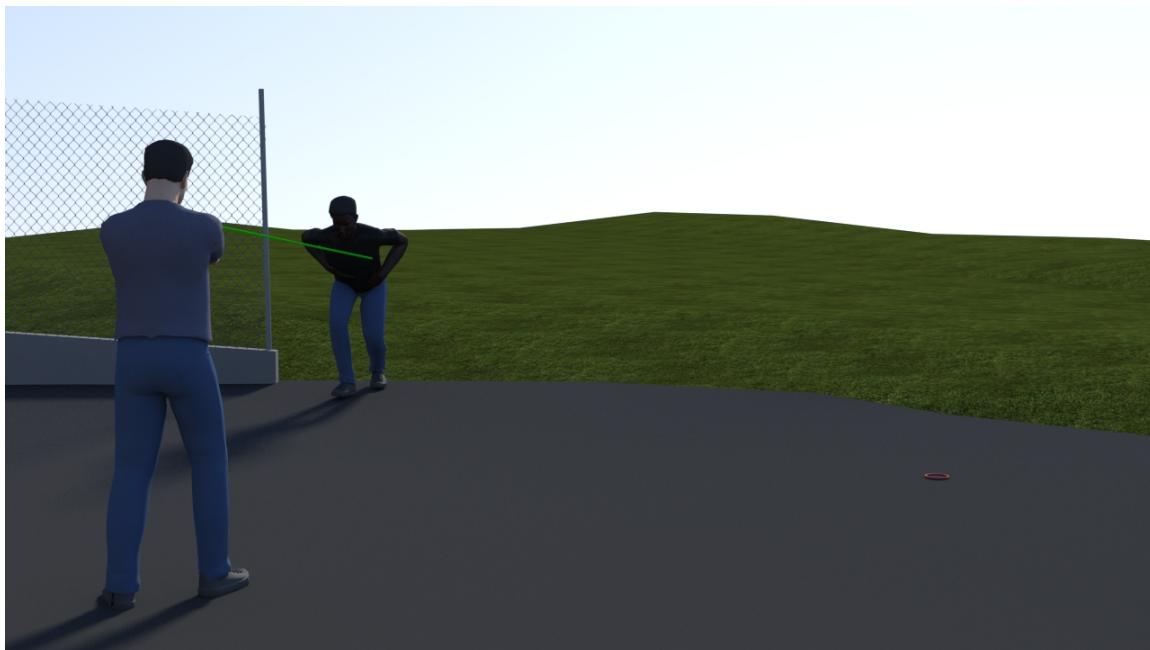


Figure 18: Graphic depicting Officer Castro's testimony regarding the location and posture of Mr. Baker when he discharged his firearm. The location of the bullet casing is marked with a red circle.

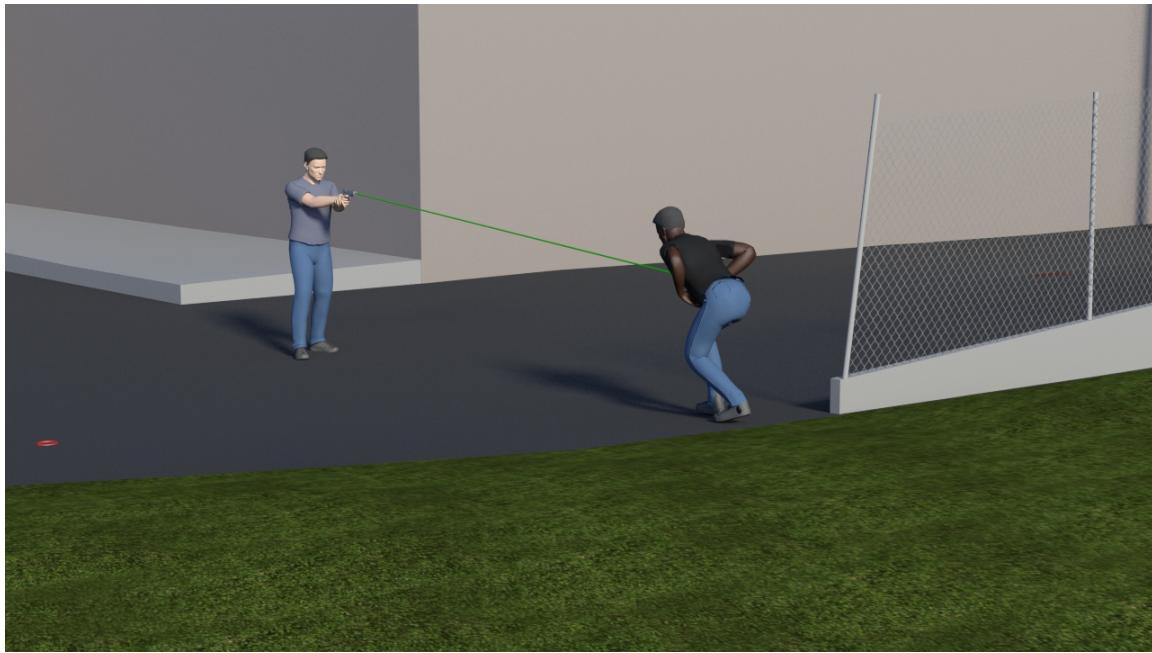


Figure 19: Graphic depicting Officer Castro's testimony regarding the location and posture of Mr. Baker when he discharged his firearm. The location of the bullet casing is marked with a red circle.



Figure 20: Graphic depicting Officer Castro's testimony regarding the location and posture of Mr. Baker when he discharged his firearm. The location of the bullet casing is marked with a red circle.

Officer Castro has testified that Mr. Baker ran “five to seven feet” before he shot him once in his center mass (229-230), but also that Mr. Baker was 7-8 feet away from him when he fired.



The position of Mr. Baker relative to Officer Castro and the trajectory of the bullet do not match the physical evidence. Specifically, the autopsy indicated that the bullet broke the anterior left front rib, 5 inches left of the anterior midline and 18.5 inches inferior to the top of the head, and was lodged in the posterior aspect of the 9th rib. Thus, the bullet entered Mr. Baker's torso on his left and traveled through the torso to his right while moving superior to inferior and anterior to posterior. This is inconsistent with Officer Castro's scenario, which has the bullet traveling parallel to Mr. Baker's sagittal plane. This would not produce the left-to-right injury pattern that was documented during the autopsy. Rather, the bullet would have translated anterior to posterior resulting in injury only to the tissues on the left side of Mr. Baker's body.

The physical evidence is also inconsistent with Officer Castro's account of Mr. Baker's motions after the gunshot. Officer Castro testified to the grand jury that after Mr. Baker was shot he immediately bent forward and did a "right pivot" and started running the other direction towards behind into the alley (89-90, 94). Officer Castro testified to the grand jury that Mr. Baker ran about 15 to 20 feet and then landed face down (91). During his deposition Officer Castro testified that after he shot Mr. Baker, Mr. Baker winced and turned direction and started running westbound (230). However, the blood path and Mr. Baker's rest position indicates that Mr. Baker had to run past Officer Castro and towards the corner of the building, and then turn to his right to move west along the building and down the alley to his rest position (Figure 21 through Figure 24). Additionally, the distance from where Officer Castro testified that he shot Mr. Baker to the first drops of blood is approximately 26 feet and the distance from this location to Mr. Baker's rest position is approximately 55 feet. Therefore, in Officer Castro's scenario, Mr. Baker had to run/move approximately 81 feet after he was shot. It is noteworthy that there was no blood found between the location where Officer Castro testified that he shot Mr. Baker (i.e. near the bayou) and the first drops of blood near the building.

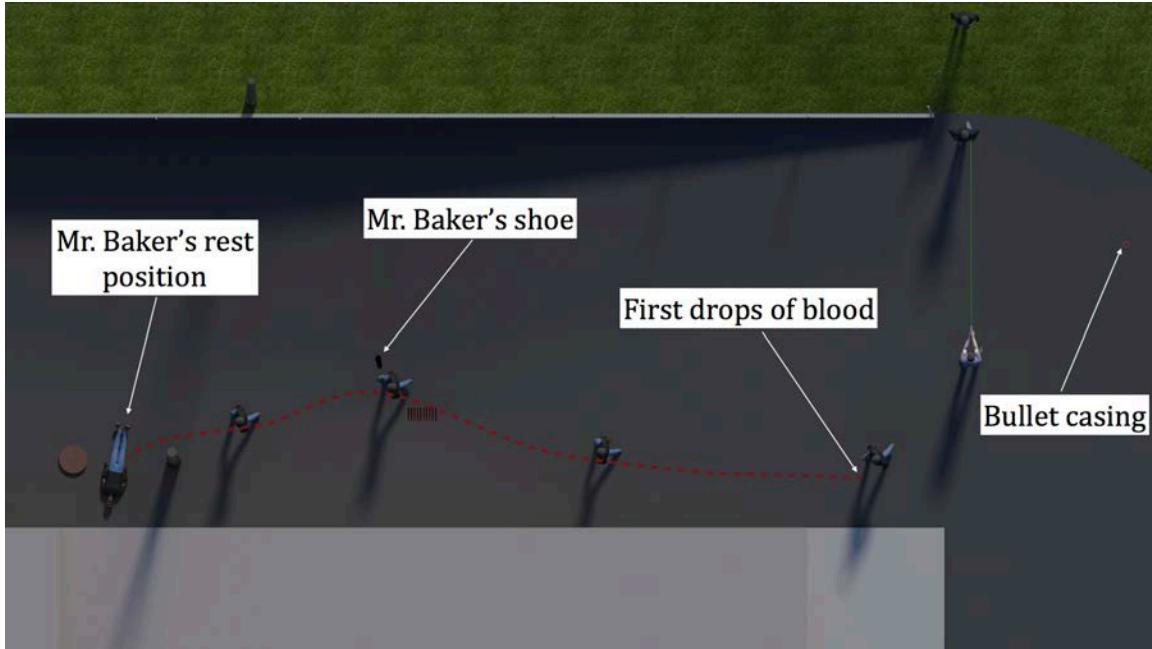


Figure 21: Depiction of Officer Castro's scenario (Mr. Baker standing) as to where he shot Mr. Baker in relation to the documented blood path and Mr. Baker's rest position (with labels).



Figure 22: Depiction of Officer Castro's scenario (Mr. Baker standing) as to where he shot Mr. Baker in relation to the documented blood path and Mr. Baker's rest position (without labels).

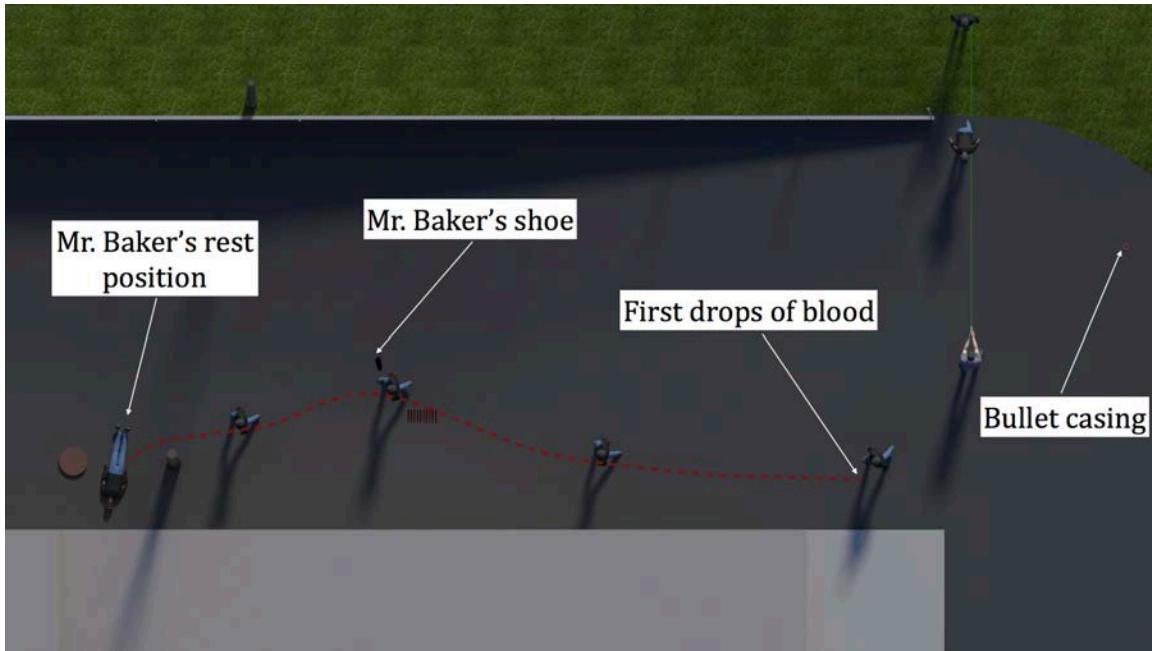


Figure 23: Depiction of Officer Castro's scenario (Mr. Baker crouched) as to where he shot Mr. Baker in relation to the documented blood path and Mr. Baker's rest position (with labels).

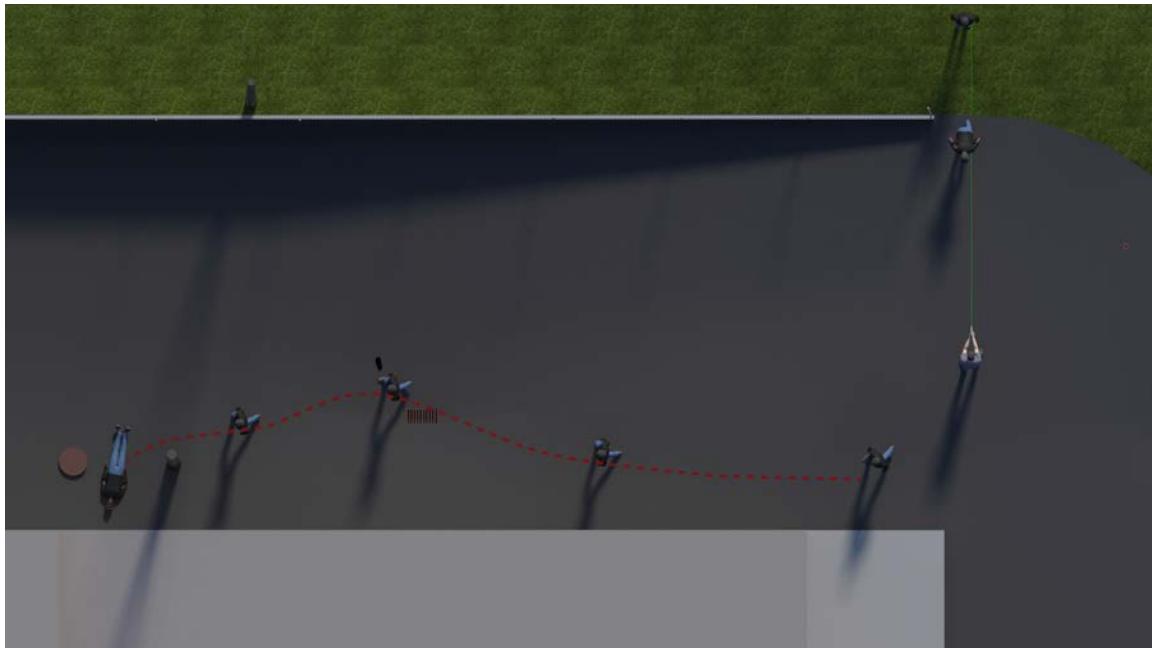


Figure 24: Depiction of Officer Castro's scenario (Mr. Baker crouched) as to where he shot Mr. Baker in relation to the documented blood path and Mr. Baker's rest position (without labels).

Another scenario was investigated based on the physical evidence from the scene. As stated previously, there was a clear left-to-right bullet trajectory based on the pattern of injury noted in Mr. Baker's autopsy. This trajectory is consistent with a scenario in which Mr. Baker's torso was rotated clockwise with respect to the barrel of Officer Castro's



gun (Figure 25 - Figure 30). This represents a kinematic pattern in which Mr. Baker was actively turning away from Officer Castro in order to move in the opposite direction. Additionally, if Mr. Baker was actively turning away from Officer Castro and attempting to run in the opposite direction, then his knees would be flexed, which would have lowered his center of gravity. Furthermore, it is more plausible that Mr. Baker was in the approximate area of the building in the vicinity of the documented blood drops at the time he received his gunshot wound. When considering Mr. Baker's posture in addition to the gradient of the surface at the location of the first visible blood drops, Officer Castro would need to pitch the barrel of his gun downwards in order shoot Mr. Baker in the chest consistent with his documented injuries (Figure 25 - Figure 30). This scenario is more consistent with Mr. Baker's documented injury pattern.

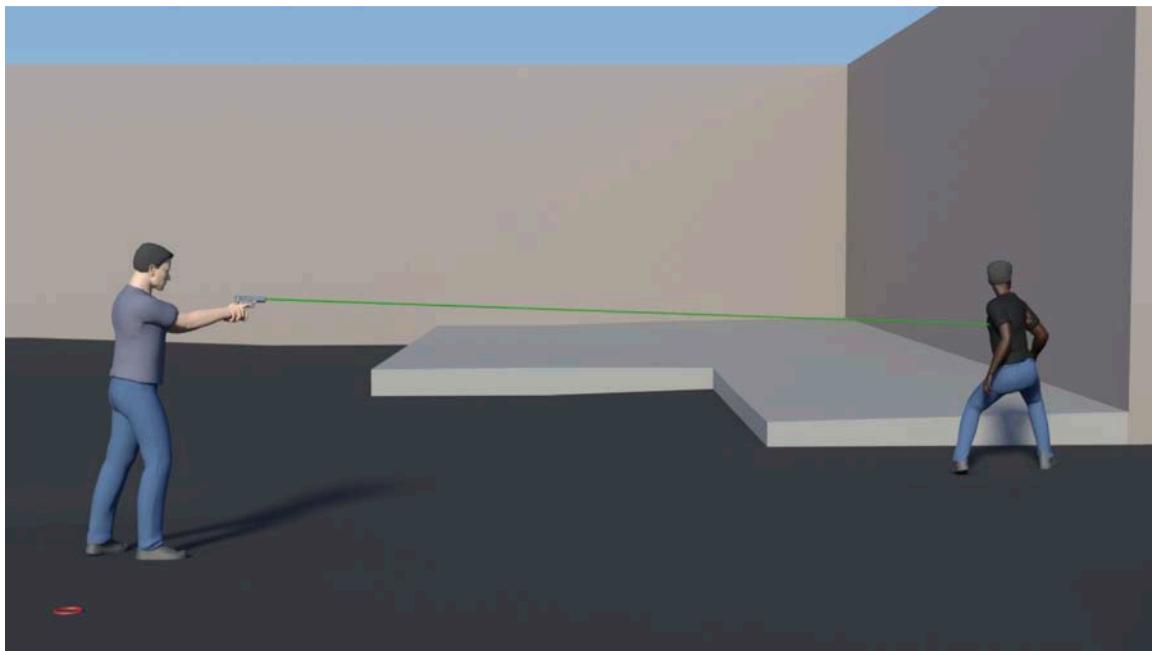


Figure 25: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario consistent with the location of blood and bullet trajectory. The location of the bullet casing is marked with a red circle.

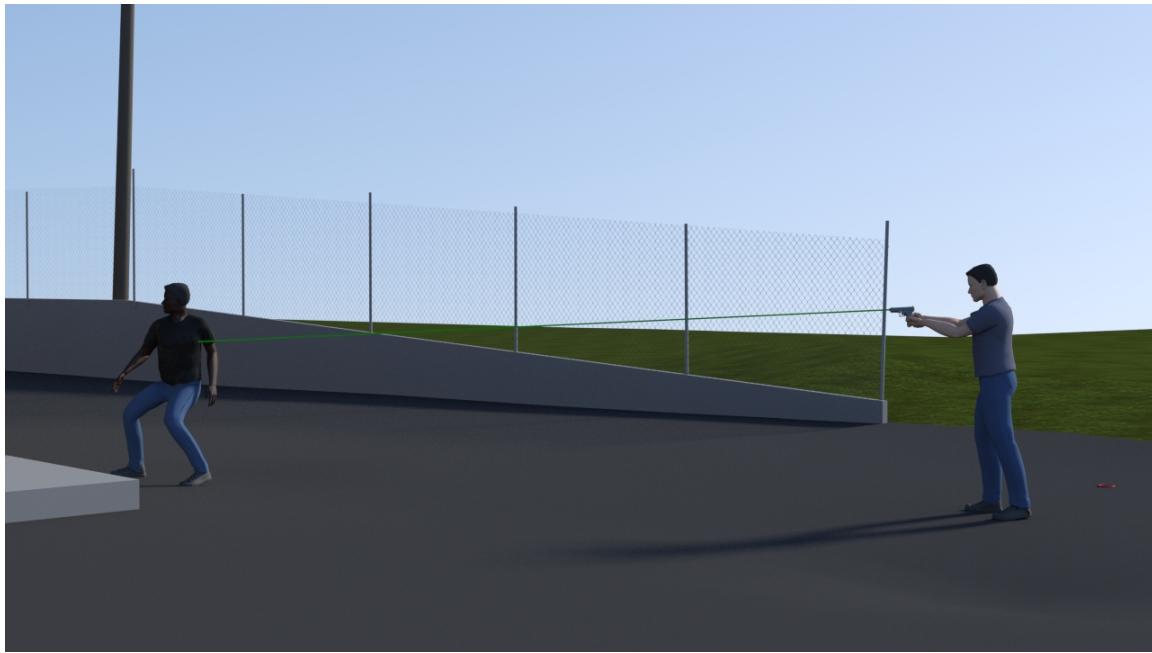


Figure 26: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario consistent with the location of blood and bullet trajectory. The location of the bullet casing is marked with a red circle.

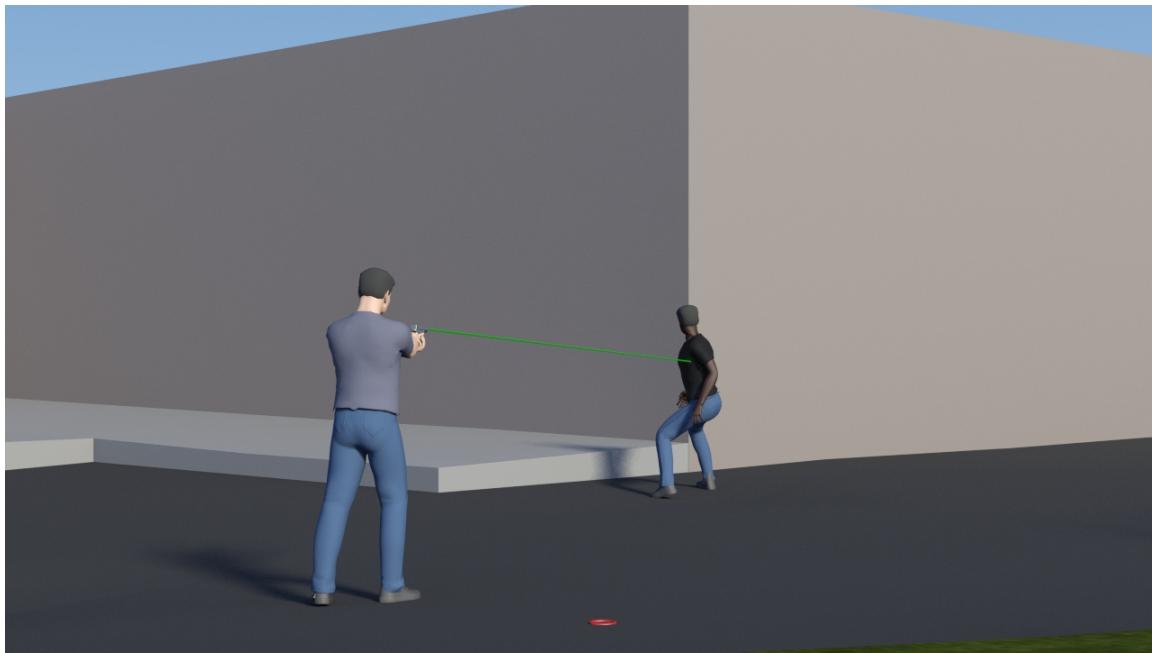


Figure 27: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario consistent with the location of blood and bullet trajectory. The location of the bullet casing is marked with a red circle.

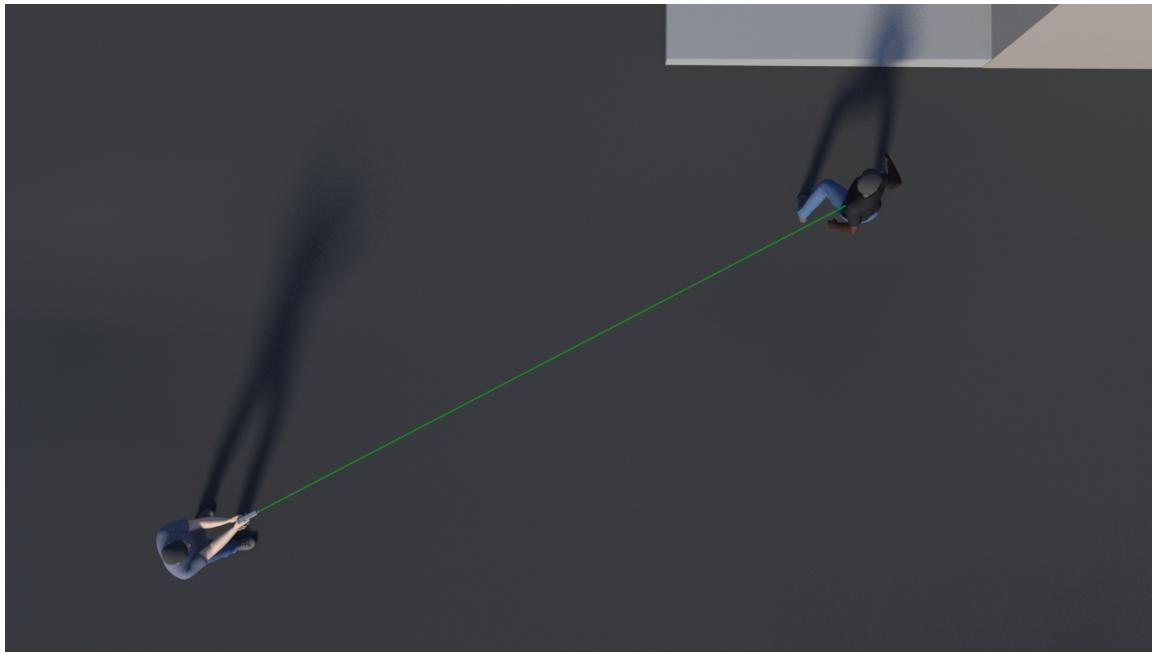


Figure 28: Computer graphic depicting the location of Officer Castro and Mr. Baker in the scenario consistent with the location of blood and bullet trajectory.

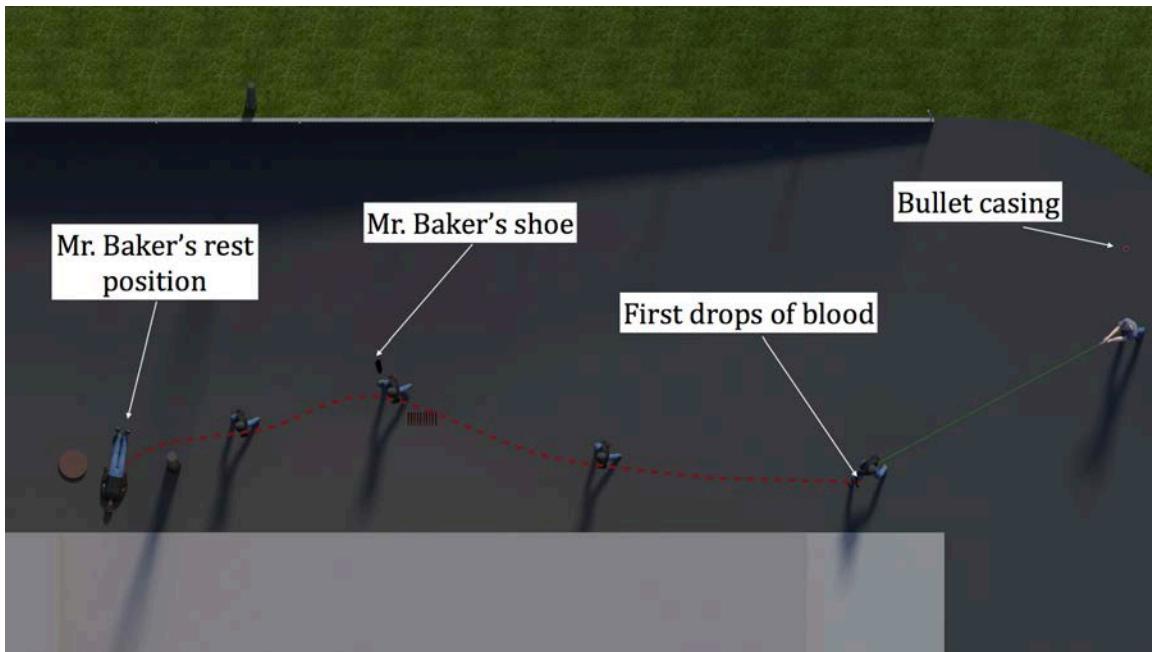


Figure 29: Illustration of the likely position of Officer Castro and Mr. Baker at the time of the gunshot with the other physical evidence documented at the scene (with labels).



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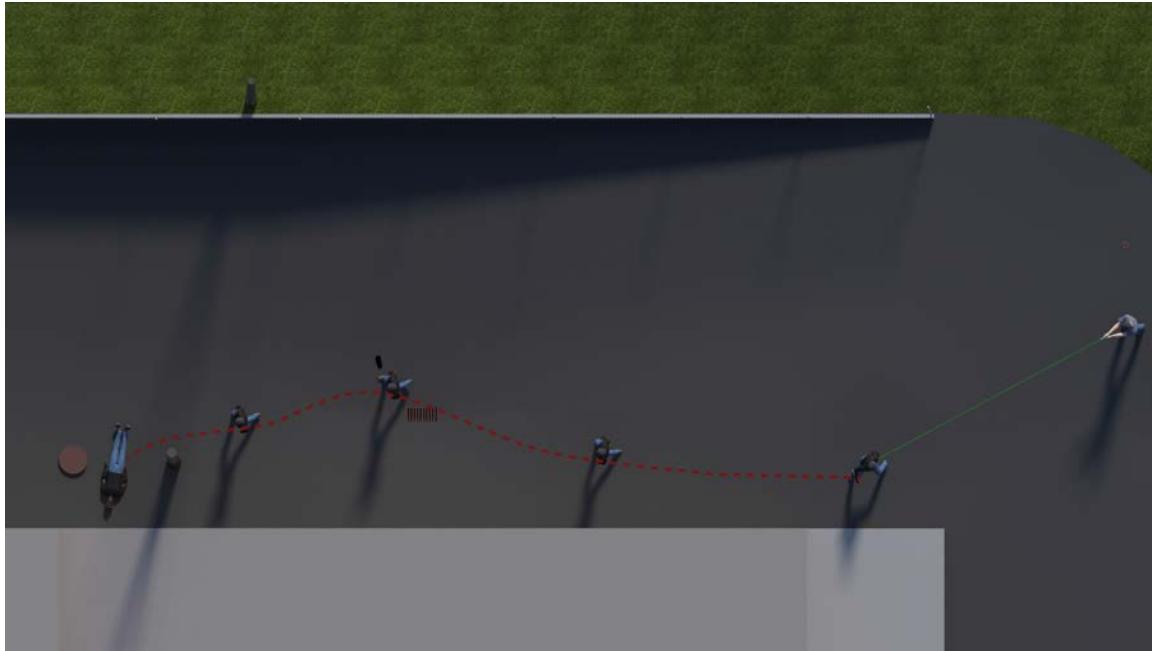


Figure 30: Illustration of the likely position of Officer Castro and Mr. Baker at the time of the gunshot with the other physical evidence documented at the scene (with out labels).

Thus, the available evidence is in support of a scenario in which Mr. Baker was turning to move away from Officer Castro while positioned near the corner of the building at the time Officer Castro shot him.



References

Folio, L. R., Fischer, T., Shogan, P., Frew, M., Dwyer, A., & Provenzale, J. M. (2011). Blast and ballistic trajectories in combat casualties: A preliminary analysis using a cartesian positioning system with MDCT. *American Journal of Roentgenology*, 197(2), 233–240. <http://doi.org/10.2214/AJR.10.5959>

Lewinski, W., Hudson, W. B., Karwoski, D., & Redmann, C. (2010). Fired Cartridge Case Ejection Patterns From Semi-Automatic Firearms. *Investigative Sciences Journal*, 2(3), 1–32. Retrieved from <http://www.forcescience.org/articles/ShellCasingStudyJOURNAL ARTICLE.pdf>



Brian Weaver, PE

248-563-9775

brian@explico.com

40028 Grand River Avenue, Suite 300, Novi, MI

Profile

Mr. Weaver is a Professional Engineer and consultant specializing in biomechanics, accident reconstruction, computer simulation, and mechanical systems design. He has experience providing consultation in the investigation and prevention of injuries from product, vehicular, workplace, and other types of accidents.

His graduate training and research was conducted in the Orthopaedic Biomechanics Laboratory at Michigan State University, which was a joint collaboration with the College of Engineering and the School of Osteopathic Medicine. His research and publications focused on the affects of blunt trauma to soft tissues.

With unique expertise in both biomechanics and accident reconstruction, he has performed investigations involving vehicle accidents (heavy trucks, passenger cars, recreational vehicles, motorcycles, etc.), pedestrian accidents, workplace accidents (railroad, maritime, construction, etc.), and aviation accidents.

Mr. Weaver has also used his expertise in vehicle accident reconstruction to determine various aspects of a collision, including: vehicle speeds, impact forces, line of sight, etc. He has applied this expertise in the investigation of low speed collisions, multi-vehicle collisions, heavy truck collisions, pedestrian impacts, and railroad grade crossing accidents.

Mr. Weaver has provided consultation associated with product failures and product recalls. His product failure experience includes assisting manufacturers with the design of laboratory and field-testing experiments to investigate possible failure modes with existing and retrofit designs.

Mr. Weaver continues to conduct research and publish with the Orthopaedic Biomechanics Laboratory at Michigan State University. This laboratory is a joint collaboration between the department of Radiology and Mechanical Engineering. Currently he is developing alternative means to measure ground reaction forces at the shoe-surface interface that occur during various kinematics.

Additionally, Mr. Weaver is an Adjunct Professor at Lawrence Technological University in the department of Life Sciences and Biomedical Engineering. He is currently teaching a class on Forensic Biomechanics. Along with his

teaching responsibilities, he is a member of the academic advisory board. In this capacity he has worked with undergraduate students by sponsoring a senior research project to determine fracture patterns in human long bones when run over by moving railroad equipment.

Education

Master of Science in Engineering Mechanics
Michigan State University, Lansing, Michigan

Bachelor of Science in Engineering Mechanics/Biomechanics
Michigan State University, Lansing, Michigan

Experience

Explico Engineering Co.
Principal Engineer - 2014-Present

Lawrence Technological University
Department of Life Sciences and Biomedical Engineering
Adjunct Professor- August 2013 - Present

Weaver Engineering Company (Renamed to Explico Engineering Co.)
President and Principal Engineer- March 2013 - May 2014

Armstrong Forensic Engineers Inc.
Director of Biomechanics- September 2011 – March 2013

Exponent Failure Analysis Associates
Managing Engineer- September 2001 - September 2011

Licenses and Certifications

- Professional Engineer, State of Michigan, #6201057631
- Professional Engineer, State of Illinois, #62059251
- Professional Engineer, State of Alabama, #28432
- Professional Engineer, State of Mississippi, #20113
- Certified Crash Data Retrieval (CDR), Vetricx, Collision Safety Institute, Inc.
- Articulated Total Body (ATB) Simulation, Veridian, Inc.
- PADI Certified Open Water Scuba Diver

Professional Organizations

- Academic Advisory Board Member, Life Science and Biomedical Engineering, Lawrence Technological University
- American Society of Biomechanics (ASB)
- Society of Automotive Engineers (SAE)
- American Society of Mechanical Engineers (ASME)

Peer Reviewed Technical Publications

Weaver BT, Braman J, Haut RC. *A Direct Method for Mapping the Center of Pressure Measured by an Insole Pressure Sensor System to the Shoe's Local Coordinate System.* J Biomechanical Engineering, 2016

Weaver BT, Fitzsimons K, Braman J, Haut RC. *The Role of Shoe Design on the Prediction of Free Torque at the Shoe-Surface Interface Using Pressure Insole Technology.* J Sports Biomechanics, 2016

Weaver BT, Fitzsimons KA, Braman JE, Haut RC. *Torque prediction at the shoe-surface interface using insole pressure technology.* J Sports Engineering and Technology, 2013

Rundell SA, Guiang A, **Weaver BT**, Meyer EG. *Characterization of Occupant Lower Extremity Behavior During Moderate-to-High Speed Rear Impacts.* Society of Automotive Engineers, 2013

Wei F, Braman JE, **Weaver BT**, Haut R. *Determination of Dynamic Ankle Ligament Strains from a Computational Model Driven by Motion Analysis Based Kinematic Data.* J Biomechanics, 2011

Peer Reviewed Technical Publications - Cont.

Weaver BT, Ruberte L, Khan F, Arndt S. *Normal pedal activation in real world situations*. Society of Automotive Engineers, 2011

Ashby B, Lai W, Carhart M, Newberry W, **Weaver BT**, Ford Corrigan C. *Compressive neck preloading during the airborne phase of vehicle rollover*. Society of Automotive Engineers, 2007

Weaver BT, Haut R. *Enforced exercise after blunt trauma significantly affects biomechanical and histological changes in rabbit retro-patellar cartilage*. J Biomechanics, 2005

Ewers B, **Weaver BT**, Haut R. *Impact orientation can significantly affect the outcome of a blunt impact to the rabbit patellofemoral joint*. J Biomechanics, 2002

Ewers B, **Weaver BT**, Sevensma E, Haut R. *Chronic changes in rabbit retropatellar cartilage and subchondral bone after blunt impact loading of the patellofemoral joint*. J Orthopaedic Research, 2002

Johnson A, Probst C, Decamp C, Rosenstein D, Hauptman J, Kern T, **Weaver BT**. *Comparison of trochlear block recession and trochlear wedge recession for canine patellar luxation using a cadaver model*. J Veterinary Surgery, 2001

Abstracts

Weaver BT, Davison M, Rundell SA, Meyer E. *An Investigation of Human Long Bone Fracture Patterns During Traumatic Amputations from Moving Railroad Equipment*. Proceedings of the Summer Biomechanics, Bioengineering and Biotransport Conference (Sb3C2016). Technical Paper No. 1092

Weaver BT, Braman J, Haut RC. *The Determination of Free Torque on Athletic Turf Surfaces Using Insole Pressure Data*. Proceedings of the Summer Biomechanics, Bioengineering and Biotransport Conference (Sb3C2016). Technical Paper No. 1079

Button KD, Rossman SM, **Weaver BT**, Rundell SA. *Cervical Spine Forces and Disc Herniation Risk During Standardized Rear-End Impact Testing*. Proceedings of the Summer Biomechanics, Bioengineering and Biotransport Conference (Sb3C2016). Technical Paper No. 930

Abstracts - Cont.

Davison MA, **Weaver BT**, Rundell SA. *Investigation of Neck and Head Injury Potential during Inertial Loading of the Pediatric Head: Implications to Shaken Baby Syndrome Characterization.* Proceedings of the American Society of Biomechanics Annual Meeting, 2015

Weaver BT, Braman J, Haut R. *A Novel Approach to Map the Center of Pressure Measured by Insole Pressure Sensor Technology onto the Shoe Coordinate System.* Proceedings, 7th World Congress in Biomechanics, 2014. Technical paper No. 14-A-3961-WCB

Weaver BT, Fitzsimons KA, Braman JE, Haut RC. *The use of plantar insole pressure sensors to predict the free torque produced at the shoe-surface interface during internal rotation of the body relative to a planted foot.* Proceedings of the ASME 2013 Summer Bioengineering Conference. SBC2013-14497.

Rundell SA, **Weaver BT**. *Forward Bending with Increased Erector Spinae Force Helps Reduce Disk Herniation Risk.* Proceedings of the American Society of Biomechanics Annual Meeting, 2012

Wei F, Braman JE, **Weaver BT**, Haut R. *Determination of In Vivo Ankle Ligament Strains During External Rotation of the Foot.* Proceedings, ASME Summer Bioengineering Conference, 2011. Technical paper No. SBC2011-53395

Giachetti R, **Weaver BT**, Trimble J. *Real-time monitoring and analysis of whole body vibration in locomotive engineers.* Proceedings, 4th International Conference on Whole Body Vibration Injuries, Montreal, QC, June 2009.

Arndt S, Krauss D, **Weaver BT**. *A previously unidentified failure mode for ladder-climbing fall protection systems.* Proceedings, American Society of Safety Engineers Professional Development Conference and Exposition, Las Vegas, NV, 2008.

McCann D, **Weaver BT**, Smith S, Meacham E. *Modal testing diagnosis of bus seat failures.* IMAC XXII Proceedings, Society of Experimental Mechanics, Dearborn, MI, January 2004.

Weaver BT, Ewers B, Haut R. *Regular exercise is beneficial to a stable joint after trauma.* Proceedings, 48th Annual Orthopaedic Research Society Meeting, 2002.

Professional Development

NORTHWESTERN UNIVERSITY CENTER FOR PUBLIC SAFETY

- Vehicle Accident Reconstruction I
- Vehicle Accident Reconstruction II

SOCIETY OF AUTOMOTIVE ENGINEERS

- Applied Vehicle Dynamics, *BMW Performance Driving School*

MICHIGAN STATE UNIVERSITY

- Neural Basis of Human Movement
 - Neural basis of sensorimotor control, investigating cortical and subcortical structure/function relationships in healthy humans, and in individuals with movement disorders.
- Experimental Design and Data Analysis
 - Practical application of statistical principles to the design of experiments and analysis of experimental data in biomedical sciences.
- Injury Control in Sports and Physical Activity
 - Principles of epidemiology to identify and analyze risk of injury in physical activities. Skills for decision-making in injury prevention programs.

Brian T. Weaver, M.Sc., P.E.

Todd Melton vs. Canadian National/Illinois Central Railroad Company

In the Circuit Court of Shelby County, Tennessee in the Thirtieth Judicial District at Memphis

Civil Action No. CT-002503-09

Deposition Testimony, Detroit, MI

January 2013

John C Wallace vs. CSX Transportation, Inc.

In the Circuit Court Twentieth Judicial Circuit St. Clair County, Illinois

Case No. 03 L 729

Deposition Testimony, Commerce Township, MI

January 2013

Glen Armstrong, Sr. vs. BNSF Railway Company, the Burlington Northern Santa Fe Railway Company, et al

In the Circuit Court of Cook County, Illinois

Case No. 10 L 008111

Deposition Testimony, Chicago, IL

March 2013

Troy Williams v Northeast Illinois Regional Commuter Railroad Corporation D/B/A/ METRA

In the Circuit Court of Cook County, Illinois

Case No. 07 L 4673

Deposition Testimony, Chicago, IL

March 2013

James Reynolds v Daniel C. Young, Individually, Rolling Frito Lays Sales, L.P., a Limited Partnership, Frito-Lays, Inc., A Delaware Corporation, Pepsico, Inc., A North Carolina Corporation, Frito-Lay RFLS Holdings, Inc., Frito-Lays Sales, Inc.

In the Circuit Court of Cook County, Illinois

Case No. 10 L 013671

Deposition Testimony, Chicago, IL

April 2013

Hans Harris v BNSF Railway Company

In the District Court Tarrant County, Texas 342nd Judicial District

Cause No. 342-235434-09

Deposition Testimony, Commerce Township, MI

April 2013



Brian T. Weaver, M.Sc., P.E.
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Mark Zeglen v William R. Okrasinski and J.B. Hunt Transport, Inc.

In the Circuit Court of Cook County, Illinois
Case No. 11 L 1999
Deposition Testimony, Commerce Township, MI
June 2013

Aaron Prange v Norfolk Southern Railway Company, Renzenberger, Inc. and Brian Kilmurray

In the Circuit Court for the City of St. Louis, Missouri
Case No. 1122-CC08386
Deposition Testimony, Detroit, MI
July 2013

Michael Petrungaro v The BELT Railway Company of Chicago

In the Circuit Court of Cook County, Illinois
Case No. 11 L 14019
Deposition Testimony, Commerce Township, MI
July 2013

James Reynolds v Daniel C. Young, Individually, Rolling Frito Lays Sales, L.P., a Limited Partnership, Frito-Lays, Inc., A Delaware Corporation, Pepsico, Inc., A North Carolina Corporation, Frito-Lay RFLS Holdings, Inc., Frito-Lays Sales, Inc.

In the Circuit Court of Cook County, Illinois
Case No. 10 L 013671
Deposition Testimony, Chicago, IL
August 2013

Aaron Prange v Norfolk Southern Railway Company, Renzenberger, Inc. and Brian Kilmurray

In the Circuit Court for the City of St. Louis, Missouri
Case No. 1122-CC08386
Deposition Testimony, St. Louis, MO
August 2013

James Reynolds v Daniel C. Young, Individually, Rolling Frito Lays Sales, L.P., a Limited Partnership, Frito-Lays, Inc., A Delaware Corporation, Pepsico, Inc., A North Carolina Corporation, Frito-Lay RFLS Holdings, Inc., Frito-Lays Sales, Inc.

In the Circuit Court of Cook County, Illinois
Case No. 10 L 013671
Trial Testimony, Chicago, IL
September 2013



Brian T. Weaver, M.Sc., P.E.
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Page 3 of 14

Nicholas Teter v Waldemar Lach
In the Circuit Court of Cook County, Illinois
Case No. 11 L 4466
Deposition Testimony, Chicago, IL
September 2013

Willard Ragland, Jr. v BNSF Railway Company
In the District Court of Tarrant County, Texas 67th Judicial District
Cause No. 067-262688-12
Deposition Testimony, Commerce Township, MI
October 2013

Cynthia M. Schiferal, Darrick and Christopher Schiferal, AETNA Life Insurance Company, PROHealth Care Inc. v. National Casualty Company, Nationwide Insurance Company of America, Sugar River Raceway, Inc.
In the Circuit Court of Green County, Wisconsin
Case No. 11-CV-00376
Code No. 30107
Deposition Testimony, Commerce Township, MI
October 2013

Christopher M. Savarese v Janusz Janowski and Grecian Delight Foods Distribution, LLC.
In the Circuit Court of Cook County, Illinois
Case No. 11 L 010132
Deposition Testimony, Troy, MI
October 2013

Susan M. Lee v David L. Duvall, Joan F. Duvall, Jennifer Olsen, David Olsen, and Susan Olsen
In the Circuit Court of Cook County, Illinois
Case No. 10 L 2914
Deposition Testimony, Commerce Township, MI
November 2013

James J. Kuh v Chicago Rail Link LLC, a subsidiary of OmniTRAX, and Union Pacific Railroad Company
In the Circuit Court of Cook County, Illinois
Case No. 2010 L 14392
Deposition Testimony, Chicago, IL
December 2013



Brian T. Weaver, M.Sc., P.E.
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Page 4 of 14

Glen Armstrong, Sr. vs. BNSF Railway Company, the Burlington Northern Santa Fe Railway Company, et al

In the Circuit Court of Cook County, Illinois
Case No. 10 L 008111
Deposition Testimony, Southfield, MI
December 2013

Tenesha Martin v Soo Line Railroad Company, a corporation, Canadian Pacific Railway, a corporation, and Central Transport, a corporation

In the Circuit Court of Cook County, Illinois
Case No. 2009 L 011812
Trial Testimony, Chicago, IL
January 2014

James J. Niemann v Illinois Central Railroad Company

In the Circuit Court of Cook County, Illinois
Case No. 2010 L 011384
Deposition Testimony, Chicago, IL
February 2014

Linda Bilandzic v Dominick's Finer Foods, Inc. of Illinois, Store #1144, and Dominick's Finer Foods, LLC

In the Circuit Court of Cook County, Illinois
Case No. 10-L-012729
Deposition Testimony, Chicago, IL
March 2014

James J. Niemann v Illinois Central Railroad Company

In the Circuit Court of Cook County, Illinois
Case No. 2010 L 011384
Trial Testimony, Chicago, IL
April 2014

Richard W. Smith v BNSF Railway Company, a corporation

In the Circuit Court Twelfth Judicial Circuit Will County, Illinois
Case No. 11-L-373
Trial Testimony, Joliet, IL
April 2014

Ray Terese v 1500 Lorene, LLC and O'Brien Realty, LLC

United States District Court Eastern District of Louisiana
Case No. 09-4342 Section "G"
Deposition Testimony, Troy, MI
April 2014



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 5 of 14

Andrea Brugger and Brian Brugger (Plaintiffs), Gallagher Bassett Service and United Healthcare Insurance Company (Involuntary Plaintiffs) v Milwaukee Brewers Baseball Club, Inc.

In the Circuit Court of Milwaukee County, Wisconsin
Case No. 13-CV-2850
Deposition Testimony, Milwaukee, WI
April 2014

Julie Lagassa v Commercial Contractors Corp/ Marathon Petroleum Company LLC (OCIP), and ACE American Insurance Company

State of Michigan Department of Licensing & Regulatory Affairs Workers' Compensation Board of Magistrates
Evidence Deposition, Bingham Farms, MI
May 2014

Mark Zeglen v William R. Okransinski and J.B. Hunt Transport, Inc.

In the Circuit Court of Cook County, Illinois
Case No. 11 L 1999
Evidence Deposition, Commerce Township, MI
June 2014

Kevin Ahr v. Rhonda Paulson

In the Circuit Court of the Nineteenth Judicial Circuit, Lake County, Illinois
Case No. 10 L 30
Deposition Testimony, Ann Arbor, MI
August 2014

Thamer Zedan v. Efren De Luna

In the Circuit Court of Cook County, Illinois
Case No. 12 L 5704
Deposition Testimony, Chicago, IL
August 2014

Christy Bancroft and Dawson Bancroft v Mary Steffen and Kimberly Stoltz

In the Circuit Court of the Twelfth Judicial Circuit Will County, Illinois
Case No. 12 L 829
Deposition Testimony, Commerce Township, MI
October 2014

Adnan Issaq v Bertha Torres, individually and as an employee/agent of Latino Express, Inc., an Illinois Corporation

In the Circuit Court of Cook County, Illinois
Case No. 12 L 001123
Deposition Testimony, Ann Arbor, MI
November 2014



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 6 of 14

Glen Armstrong v BNSF Railway Company; The Burlington Northern Santa Fe Railway Company, BNSF Railway Company d/b/a The Burlington Northern Santa Fe Railroad Company

The United States District Court for the Northern District of Illinois Eastern Division
Case No. 1:12-cv-07962
Deposition Testimony, Chicago, IL
November 2014

Jerome Tortomasi v Suburban Mobility Authority for Regional Transportation a Michigan transportation authority, and Marvin Ray Glover

In the Circuit Court of the County of Macomb
Case No. 13-2205-NI
Deposition Testimony, Bloomfield Hills, MI
December 2014

Scott Christian v Illinois Central Railroad Company

In the United States District Court for the Southern District of Mississippi Northern Division
Civil Action No. 3:14CV57 HTW-LRA
Deposition Testimony, Ann Arbor, MI
January 2015

Tommy Horn v BNSF Railway Company
In the County Court Dallas County, Texas
At Law Number Five
Deposition Testimony
Ann Arbor, MI
March 2015

Charles R. Falkner, Sr. and Beverly A. Falkner v. Unigard Insurance Company, Ultrashred Sales & Service, LLC, Continental Western Insurance Company, Trivan Truck Body, LLC, Liberty Mutual Insurance Company, and Chase Equipment Leasing, INC., d/b/a JPMorgan Chase Bank, National Association

In the Circuit Court Milwaukee County, Wisconsin
Case No.: 13-CV-008363
Case Code: 30100
Deposition Testimony
Milwaukee, WI
March 2015

Frankie Harrison v Charles Walker
In the Circuit Court of Cook County, Illinois
Case No. 11 L 10358
Deposition Testimony
Ann Arbor, MI
April 2015



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 7 of 14

Douglas Lucas v Meemic Insurance Company
In the Circuit Court for the County of Washtenaw, Michigan
Civil Action No. 14-764-NF
Deposition Testimony
Troy, MI
May 2015

Shirley J. Little v Lucky's Auto Tow, Inc., et al.
In the Circuit Court of Cook County, Illinois
Case No. 2010 L 008003
Deposition Testimony
Ann Arbor, MI
May 2015

Jim Major and Genee Ciurus Major v Patrick Pui Heng Wong, L.V. Henderson and Madeline Grzanich
In the Circuit Court of Cook County, Illinois
Case No. 11 L 10269
Consolidated with
Case No. 10 M2 2310
Deposition Testimony
Ann Arbor, MI
May 2015

Mark Perman v BNSF Railway Company
District Court, County of Hennepin, Fourth Judicial District, State of Minnesota
File No. 27-cv-14-7166
Trial Testimony
Minneapolis, MN
June 2015

Toby Crosby v The Indiana Rail Road Company
United States District Court Southern District of Illinois
No. 14-974-NJR-SCW
Deposition Testimony
Chicago IL
July 2015

Daniel Van Nice v CSX Transportation, Inc.
In the Circuit Court of Shelby County, TN
In the Thirtieth Judicial District at Memphis
Docket No. CT-001398-10
Deposition Testimony
Ann Arbor MI
July 2015



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 8 of 14

Aaron Prang v Norfolk Southern Railway Company; Renzenberger, Inc.; and Brian Kilmurray

In the Circuit Court for the City of St. Louis State of Missouri

Case No. 1122-CC08386

Trial Testimony

St. Louis, Missouri

August 2015

Aaron Larson v BNSF Railway Company, a Delaware Corporation

District Court, County of Hennepin, Fourth Judicial District, State of Minnesota

Court File No: 27-CV-14-2083

Trial Testimony

Minneapolis, Minnesota

August 2015

Carlos J. Falagan v Union Pacific Railroad Company

In the Circuit Court of Cook County Illinois

No. 2010 L 001091 – F

Deposition Testimony

Chicago, Illinois

August 2015

Bryan Risner v BNSF Railway Company

United States District Court, Eastern District of Arkansas, Western Division, Little Rock

Civil Action No. 4:14-CV-00485-BRW

Deposition Testimony

Ann Arbor, Michigan

September 2015

Doris Castro v Branson Executive Center, L.P., Kurdis Land and Acquisition LLC, Maple Properties, LLC, North American Property Maintenance, Inc. and Addison Insurance Company

In the Circuit Court of Taney County, Missouri

Case No. 11AF-CC00515

Deposition Testimony

St. Louis, Missouri

October 2015

Kenneth Lipson v Colton Graub

State of Michigan In the Circuit Court For The County of Oakland

Case No. 2014-142441-NI

Deposition Testimony

Mt. Clemens, Michigan

October 2015



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 9 of 14

James E. Wright v BNSF Railway Company
In the United States District Court Northern District of Oklahoma
Cause No. 13CV24-JED-FHM
Deposition Testimony
Ann Arbor, Michigan
November 2015

Kelly Neal v BNSF Railway Company
In the District Court of Tarrant County, Texas 153rd Judicial District
Cause No. 153-244132-10
Trial Testimony
Amarillo, Texas
February 2016

Robert Edmondson v BNSF Railway Company
District Court, County of Hennepin, Fourth Judicial District, State of Minnesota
Court File No. 27-CV-14-19663
Trial Testimony
Minneapolis, Minnesota
February 2016

Gregory Jones v Village of Evergreen Park
In the Circuit Court of Cook County, Illinois
Case No. 2014 L 000116
Deposition Testimony
Novi, Michigan
February 2016

Sheila Foster V Auto-Owners Insurance Company, Moises Gutierrez and Sandra Gutierrez
In the Circuit Court for the County of Wayne, Michigan
Case No. 14-009435-NI
Trial Testimony
Detroit, Michigan
March 2016

Michael Martin v Norfolk Southern Railway Company, a.k.a. Norfolk Southern Corporation
In the Common Pleas Court of Lucas County, Ohio
Case No.: CI020150.032
Deposition Testimony
Toledo, Ohio
April 2016



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 10 of 14

Levar A. Jackson v Rouba A. Barakat, et al.

In the Circuit Court of the 18th Judicial Circuit Du Page County, Illinois
Case No.: 2013 L 971
Deposition Testimony
Novi, Michigan
April 2016

George Ortiz & Don Gresak v Union Pacific Railroad Company

In the District Court Harris County, Texas 334th Judicial District
Cause No. 2015-0757
Deposition Testimony
Novi, Michigan
September 2016

Raymond S. Campana, individually and as Successor in Interest to the Estate of Mercilena Irene Otero; Raeann N. Campana; Manuel J. Jiminez; Annie M. Tula vs. State of California; Cal Trans; County of San Bernardino; Chrysler Group LLC; Rally Auto Group, Inc.; 3 Brothers Auto Sales, Inc.; Does 1 – 50, inclusive.

Superior Court of the State of California County of San Bernardino
Case No. CIVDS1310308
Deposition Testimony
Los Angeles, CA
October 2016

George Ortiz and Don Gresak vs. Union Pacific Railway Company

In the District Court Harris County, Texas 334th Judicial District
Cause no. 2015-07157
Deposition Testimony
Novi, MI
October 2016

Wendy A. Lawrence and James R. Lawrence as Conservators of the Estate of Bobby Ian Lawrence vs. Rose Black

In the Circuit Court for the County of Oakland, Michigan
Case No. 15-149437-NI
Trial Testimony
Pontiac, MI
October 2016



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 11 of 14

Raymond S. Campana, individually and as Successor in Interest to the Estate of Mercilena Irene Otero; Raeann N. Campana; Manuel J. Jiminez; Annie M. Tula vs. State of California; Cal Trans; County of San Bernardino; Chrysler Group LLC; Rally Auto Group, Inc.; 3 Brothers Auto Sales, Inc.; Does 1 – 50, inclusive.

Superior Court of the State of California County of San Bernardino
Case No. CIVDS1310308
Trial Testimony
San Bernardino, CA
November 2016

Scott Christian vs. Illinois Central Railroad Company

In the United States District Court for the Southern District of Mississippi Northern Division
No. 3:14cv57-HTW-LRA

Trail Testimony
Jackson, MS
November 2016

Marilyn Smith, wife of/and Jonathan Smith versus Liberty Surplus Insurance Corporation, B&G Crane Service, LLC and John Doe

Civil District Court for the Parish of Orleans State of Louisiana
No. 2012-5830 Division "N" Section 8
Deposition Testimony
Novi, MI
November 2016

Steven R. Lilly vs. Grand Trunk Western Railroad Company

State of Michigan in the Circuit Court for the County of Wayne
Case No. 16-001908-NO
Trial Testimony
Detroit, MI
December 2016

Joseph Holody vs. Pioneer State Mutual Insurance Company

In the Circuit Court for the County of Macomb State of Michigan
Case No. 15-0102-NF
Trial Testimony
Mt. Clemens, MI
February 2017

Richard Parker vs. John J. Torres and Laboratory Corporation of America d/b/a Labcorp

In the District Court 57th Judicial District Bexar County, Texas
No. 2015CI06001
Deposition Testimony
Austin, TX
March 2017



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 12 of 14

Johnny Bryan v. Illinois Central Railroad Company

In The Circuit Court of Cook County State of Illinois
Cause No. 15 L 11243
Deposition Testimony
Chicago, IL
March 2017

Wladyslaw Kozik vs. Mark Nagy

In The Circuit Court of Cook County State of Illinois
Cause No. 15 L 3708
Deposition Testimony
Novi, MI
March 2017

Wladyslaw Kozik vs. Mark Nagy

In The Circuit Court of Cook County State of Illinois
Cause No. 15 L 3708
Trial Testimony
Chicago, IL
April 2017

Vera Alexander v Isis U. Aaron

In The Circuit Court of Cook County State of Illinois
Cause No. 15 L 007181
Deposition Testimony
Chicago, IL
May 2017

Layne Fivecoat v BSNF Railway Company

In the District Court in and for Creek County State of Oklahoma
Case no. CJ-2015-11
Deposition Testimony
Novi, MI
May 2017

Vera Alexander v Isis U. Aaron

In The Circuit Court of Cook County State of Illinois
Cause No. 15 L 007181
Trial Testimony
Chicago, IL
July 2017



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 13 of 14

Aubrey Bolden v Illinois Central Railroad Company d/b/a Canadian National/Illinois Central

In The Circuit Court of Cook County State of Illinois
Cause No. 15L 11272
Deposition Testimony
Chicago, IL
August 2017

Randall Felts v Illinois Central Railroad Company d/b/a Canadian National/Illinois Central

In The Circuit Court of Cook County State of Illinois
Cause No. 15L 11247
Deposition Testimony
Chicago, IL
August 2017

Krystyna Jacniacka vs. Charles Wiedemann

In the Circuit Court of the 19th Judicial Circuit, Lake County, Illinois
Case No. 13 L 14
Deposition Testimony
Schaumburg, IL
August 2017

Tad E. Collier v. Norfolk Southern Railway Company

In the Circuit Court of Clay County, Missouri
Case No. 15CY-CV06848
Deposition Testimony
Kansas City, MO
September 2017

Michael Rowan vs. Sunflower Electric Power Corporation, Mid-Kansas Electric Company, LLC, and Power Constructors, Inc.

In the United States District Court for the District of Kansas
Case No. 2:15-cv-9227-JWL-TJJ
Trial Testimony
Kansas City, MO
September 2017

Vincent Owen vs. Dennis Conto, Luther Logistic Transportation, LLC and/or Luther Leasing, LLC and State Farm Mutual Automobile Insurance Company

In the Circuit Court for the County of Macomb
Case No: 16-563-NI
Deposition Testimony
Novi, MI
September 2017



Brian T. Weaver, M.Sc., P.E.
Testimony list
Page 14 of 14

Richard Parker vs. John J. Torres and Laboratory Corporation of America d/b/a Labcorp

In the District Court 57th Judicial District Bexar County, Texas

Cause No. 2015C106001

Trial Testimony

San Antonio, TX

October 2017



EXHIBIT 3